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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

TRAN, TRANG U

ART UNIT

PAPER NUMBER

2614

10

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/639,804

Applicant(s)

MINO, KAZUHIRO

Examiner

Trang U. Tran

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6,8-10,14,19,21-23,27,32,34-36 and 40-42 is/are pending in the application.
- 4a) Of the above claim(s) 10,23,36 and 40-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6,8,9,14,19,21,22,27,32,34 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

1. It is noted that applicant previously elected claims 1, 6, 8-10, 14, 19, 21-23, 27, 32 and 34-36 as a single disclosed species (species IV) under 35 U.S.C § 121.

The amendment filed on June 30, 2004, claims 10, 23 and 36 have been amended to include the non-elected species (species V). Thus, the amended claims 10, 23 and 36 and their newly added dependent claims 40-42 have been withdrawn from consideration.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 6, 8-9, 14, 19, 21-22, 27, 32 and 34-35 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 6, 8-9, 14, 19, 21-22, 27, 32 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (US Patent No. 5,960,123) in view of Edgar (US Patent No. 5,265,200).

In considering claim 1, Ito discloses all the claimed subject matter, note 1) the claimed generating image data from an image is met by the image input means 1 for feeding the image signal, which represents an original image (Fig. 1, col. 5, lines 60-67),

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and 2) the claimed obtaining one multi-resolution image data in each of a plurality of frequency bands by converting the image data into multiple resolution is met by the multi-resolution decomposing process means 2 for carrying out a multi-resolution decomposing process on the original image and thereby obtaining decomposed images of a plurality of different frequency bands (Figs. 1 and 2, col. 6, line 1 to col. 9, line 25).

However, Ito explicitly does not disclose the claimed quantifying a sense of contrast of an image, based on the multi-resolution image data.

Edgar teaches that the process of the invention is comprised of three steps, first the image is digitized or capture with an appropriate digital video capture system such as that hereinafter described generally, with the thus-captured pels in storage, a gray scale histogram is created, the build histogram 54 essentially builds a graph showing the frequency of occurrence for each level in the gray scale (col. 4, line 62 to col. 6, line 13), and the best fit curve 56 which is functionally altered in accordance with the best fit curve generated from the original image digitized at block 52 and the corrected image according to best fit 60 which is resulting in a digital image corrected automatically for contrast (Figs. 3, 4 and 6, col. col. 9, line 20 to col. 13, line 56).

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the build histogram and the best fit curve as taught by Edgar into Ito's system in order to provide the artistic function heuristically without user intervention by automatically performing basic contrast correction on a capture image (col. 3, lines 21-24 of Edgar).

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In considering claim 6, note 1) the claimed generating a histogram of the multi-resolution image data in each of the frequency bands, wherein said quantifying the sense of contrast is based on the histogram in each of the frequency bands is met by the build histogram 54 and the best fit curve 56 which is functionally altered in accordance with the best fit curve generated from the original image digitized at block 52 and the corrected image according to best fit 60 which is resulting in a digital image corrected automatically for contrast (Figs. 3 and 4, col. 9, line 20 to col. 13, line 56 of Edgar), 2) the claimed extracting, as a light portion, an area in which pixel of the image values are equal to or larger than a predetermined threshold value from the first multi-resolution image data in the first frequency band is met by the extracting the detail image b_k which is compared with a predetermined threshold value α , and in case where the picture element value of the picture element is larger than the threshold value α , the degree of emphasis for the picture element is set to be low (Figs. 5 and 6, col. 9, line 25 to col. 10, line 31 of Ito), and 3) the claimed quantifying the sense of contrast based on the histogram in each of the frequency band is met by the build histogram 54 and the best fit curve 56 which is functionally altered in accordance with the best fit curve generated from the original image digitized at block 52 and the corrected image according to best fit 60 which is resulting in a digital image corrected automatically for contrast (Figs. 3 and 4, col. 9, line 20 to col. 13, line 56 of Edgar).

In considering claim 8, the claimed further comprising the step of carrying out image processing on the image data based on the sense of contrast is met by is met by the corrected image according to best fit 60 which is resulting in a digital image

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corrected automatically for contrast (Figs. 3 and 4, col. 9, line 20 to col. 13, line 56 of Edgar).

In considering claim 9, the claimed wherein the image processing is at least one of tone conversion processing, frequency enhancing processing, AE processing and chroma conversion processing is met by the corrected image according to best fit 60 which is resulting in a digital image corrected automatically for contrast (Figs. 3 and 4, col. 9, line 20 to col. 13, line 56 of Edgar).

Claim 14 is rejected for the same reason as discussed in claim 1.

Claim 19 is rejected for the same reason as discussed in claim 6.

Claim 21 is rejected for the same reason as discussed in claim 8.

Claim 22 is rejected for the same reason as discussed in claim 9.

Claim 27 is rejected for the same reason as discussed in claim 1.

Claim 32 is rejected for the same reason as discussed in claim 6.

Claim 34 is rejected for the same reason as discussed in claim 8.

Claim 35 is rejected for the same reason as discussed in claim 9.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (703) 305-0090. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (703) 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TT TT
October 30, 2004


JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600